

A new species of *Cyrtophora* (Araneae: Araneidae) from Thailand

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Abstract — A new species of *Cyrtophora* is described on the basis of specimens collected from Trang Province, Thailand, under the name of *Cyrtophora sextuberculata* n. sp. This species can be distinguished from other congeners by the elongated abdomen having three pairs of tubercles. The shape of epigyne of this species resembles that of *C. crassipes* (Rainbow 1897), but the abdomen of the latter has only a pair of dorsal tubercles and bifurcated posterior end. The male of the latter species is still unknown.

Key words — Araneae, Araneidae, *Cyrtophora*, taxonomy, new species, Thailand

Introduction

The genus *Cyrtophora* Simon 1864 comprises 43 species described mainly from Old World (Platnick 2014). Recently, several interesting specimens of the genus have been found during a survey of spider fauna in southern part of Thailand. They were found in their webs built at low position in swampy lowland forest. This species is described as a new species in this paper.

Materials and methods

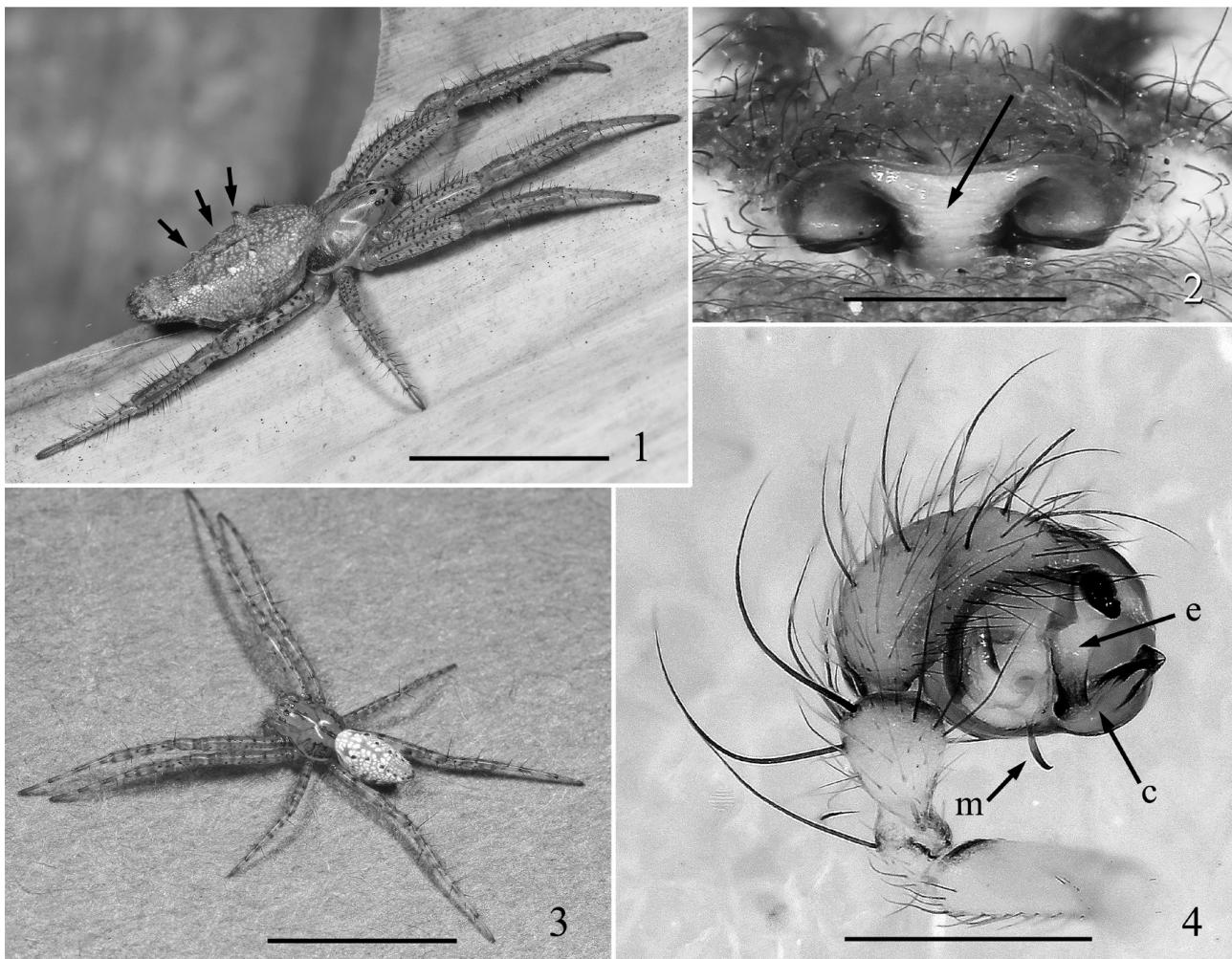
The specimens were preserved in 75% ethanol at room temperature. The morphological characters were examined under stereoscopic microscope M3Z (Wild Heerbrugg AG, Heerbrugg, Switzerland), photographs were taken by EOS Kiss X7 with EF100 mm or MP-E macro lens and MT-24EX macro twin flash (Canon Inc., Tokyo, Japan) or attached to stereoscopic microscope. All measurements are given in mm. The type specimens designated in this paper are deposited in the collections of the Princess Maha Chakri Sirindhorn Natural History Museum, Prince of Songkla University, Hat Yai, Thailand (PSUZC).

The spider in question has characteristic shape of abdomen, that is, having three pairs of dorsal tubercles, elongated, not bifurcated at the posterior end. We compared it with the all of known species of the genus mainly by the shape of the abdomen. In the course of morphological study, we examined the type specimens of *Cyrtophora eczematica* (Thorell 1892) and *C. limbata* (Thorell 1898) to confirm the feature.

Results

The following 11 species of the genus *Cyrtophora* have

only 1 pair of dorsal tubercles: *bidenta* Tikader 1970, *bimaculata* Han, Zhang & Zhu 2010, *cylindroides* (Walckenaer 1841), *feai* (Thorell 1887), *guangxiensis* Yin et al. 1990, *ikomosanensis* (Bönenberg & Strand 1906), *koronadalensis* Barrion & Litsinger 1995, *lacunaris* Yin et al. 1990, *limbata* (Thorell 1898), *lineata* Kulczyński 1910, *moluccensis* (Doleschall 1857); the following 3 species have 2 pairs of dorsal tubercles: *cicatrosa* (Stoliczka 1869), *forbesi* (Thorell 1890), *rainbowi* (Roewer 1955); the following 8 species don't have any tubercle: *admiralia* Strand 1913, *beccarii* (Thorell 1878), *cordiformis* (L. Koch 1871), *doriae* (Thorell 1881), *lahirii* Biswas & Raychaudhuri 2004, *larinioides* Simon 1895, *nareshi* Biswas & Raychaudhuri 2004; the following 7 species have bifurcated caudal end: *bicauda* (Saito 1933), *cephalotes* Simon 1877, *crassipes* (Rainbow 1897), *jabalpurensis* Gajbe & Gajbe 1999, *petersi* Karsch 1878, *parnasia* L. Koch 1872, *citricola* (Forsskål 1775), *subacalypha* (Simon 1882); the following 7 species have inverted triangular shaped abdomen with shoulder hump: *diazoma* (Thorell 1890), *eczematica* (Thorell 1892), *exanthematica* (Doleschall 1859), *gazellae* (Karsch 1878), *leucopicta* (Urquhart 1890), *parangexanthematica* Barrion & Litsinger 1995, *trigona* (L. Koch 1871); the following 3 species have lumpy surface: *gemmosa* Thorell 1899, *monulfi* Chrysanthus 1960, *unicolor* (Doleschall 1857); the abdomen of *hirta* L. Koch 1872 has waving lateral outline. Thus, the spider in question can be separated from the above species by the shape of abdomen; and it can be separated from *ksudra* Sherriffs 1928, though its shape of abdomen is uncertain, by much larger size (14 mm vs 4 mm in total length of adult female). The original illustration of *caudata* Bönenberg & Lenz 1895 shows that it should be a member of the genus *Cyclosa*. Remaining one species, *hainanensis*



Figs. 1–4. *Cyrtophora sextuberculata* n. sp. 1, female (holotype), arrows show dorsal tubercles; 2, epigyne (holotype), arrow shows median septum; 3, male (paratype); 4, male left palp, prolateral view (paratype), m: median apophysis, e: embolus, c: conductor. Scales=10 mm (1); 0.5 mm (2, 4); 5 mm (3).

Yin et al. 1990 also has three pairs of tubercles on dorsum of abdomen, but its general appearance is much more similar to *cicatrosa* (Stoliczka 1869) than the spider in question, and its median septum of epigyne is much narrower than that of the spider in question.

Accordingly, we came to the conclusion that the spider in question is new to science.

Description of new species

Cyrtophora sextuberculata n. sp.

[Thai name: Mangmoum-Yai-Tent-Trang]
(Figs. 1–4)

Type series. Holotype: ♀, Peninsular Botanical Garden (Thung Khai), Tambon Thung Khai, Yan Ta Khaow District, Trang Province, Thailand (7.46291N, 99.63811E), 11-X-2013 (PSUZC_AR 001 2481). Paratypes: 1♀1♂, same data as the holotype (PSUZC_AR 001 2482–2483). All the specimens were collected by A. Tanikawa & B. Petcharad.

Etymology. The specific name is derived from its

characteristic shape of abdomen.

Diagnosis. The present new species can be distinguished from other congeners by the elongated abdomen having three pairs of tubercles; it can be separated from *C. hainanensis* Yin et al. 1990, also has three pairs of tubercles, by general appearance and wide median septum of epigyne; the shape of epigyne of this species resembles that of *C. crassipes* (Rainbow 1897), but the abdomen of the latter species has only a pair of dorsal tubercles and has bifurcated posterior end.

Description. Coloration and markings. Female (holotype, Fig. 1): carapace pale brown, laterally darker, with dark color midline. Dorsum of abdomen pale brown. Male (paratype, Fig. 3): carapace pale brown, laterally darker, with dark color midline. Dorsum of abdomen whitish pale brown, laterally yellowish, with several pairs of small black spots.

Measurements. Female holotype (female paratype in parentheses)/male paratype. Body 13.69 (15.38) / 4.19 long. Carapace 5.06 (5.69) / 1.85 long; 3.63 (4.25) / 1.38

wide. Length of legs [tarsus + metatarsus + tibia + patella + femur = total]: I, $1.44 + 3.69 + 3.59 + 2.13 + 4.94 = 15.79 / 0.85 + 1.71 + 1.55 + 0.74 + 2.00 = 6.85$; II, $1.38 + 3.38 + 3.19 + 2.06 + 4.63 = 14.64 / 0.79 + 1.50 + 1.35 + 0.68 + 1.85 = 6.17$; III, $1.13 + 2.19 + 1.69 + 1.38 + 3.00 = 9.39 / 0.55 + 0.83 + 0.68 + 0.48 + 1.14 = 3.68$; IV, $1.31 + 3.94 + 3.03 + 1.91 + 4.75 = 14.94 / 0.73 + 1.60 + 1.23 + 0.63 + 1.81 = 6.00$. Abdomen $8.50 (10.6) / 2.13$ long; $4.10 (4.92) / 1.23$ wide.

Female (Fig. 1). Carapace longer than wide [length divided by width 1.40 (1.34)]. Median ocular area longer than wide [length divided by width 1.17 (1.20)]; almost as wide in front as behind [anterior width divided by posterior width 1.07 (0.97)]. Labium wider than long [length divided by width 0.61 (0.63)]. Sternum longer than wide [length divided by width 1.14 (1.09)]. Length of leg I divided by length of carapace 3.12 (2.99). Abdomen longer than wide [length divided by width 3.12 (2.99)], with three pairs of tubercles. Epigyne as in fig. 3, with wide median septum.

Male (Fig. 3). Carapace longer than wide (length divided by width 1.35). Median ocular area slightly longer than wide (length divided by width 1.09); wider in front than behind (anterior width divided by posterior width 1.10). Labium wider than long (length divided by width 0.65). Sternum longer than wide (length divided by width 1.15). Length of leg I divided by length of carapace 3.70. Palp as in Fig. 4, median apophysis thin, combination of embolus and conductor forms L-shape. Abdomen longer than wide (length divided by width 1.73), with three pairs of small tubercles.

Distribution. Thailand (known only from the type locality).

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